

TUNG-SOL

CATHODE RAY

THE 16EP4, 16EP4A AND 16EP4B ARE DIRECT-VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL *EXCEPT* THAT THE 16EP4A AND 16EP4B HAVE GREY FILTER FACEPLATES. THE FACEPLATE OF THE 16EP4B HAS ALSO BEEN TREATED TO REDUCE SPECULAR REFLECTION. THEIR COMMON FEATURES INCLUDE:

UNIPOTENTIAL CATHODE	ROUND METAL CONSTRUCTION
MAGNETIC FOCUS & DEFLECTION	EXTERNAL SINGLE FIELD ION TRAP
10" X 13 1/4" RASTER SIZE	

ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.)	60	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	$\mu\mu\text{f}$
GRID #1 TO ALL OTHER ELECTRODES	6	$\mu\mu\text{f}$

OPTICAL DATA

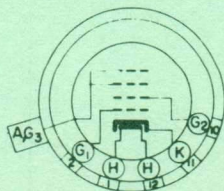
PHOSPHOR NUMBER		NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	16EP4A-B 66	PERCENT
SPECULAR REFLECTION OF AMBIENT LIGHT	16EP4B 2.5	PERCENT

MECHANICAL DATA

OVERALL LENGTH	19 5/16 $\pm$ 3/8	INCHES
GREATEST DIAMETER OF BULB	15 7/8 $\pm$ 1/8	INCHES
MINIMUM USEFUL SCREEN DIAMETER	14 3/8	INCHES
BULB CONTACT	METAL CONE LIP	
BASE	SMALL SHELL DUODECAL 5 PIN	85-57
BASING		12 D

PIN CONNECTIONS

PIN 1 - HEATER
 PIN 2 - GRID NO. 1
 PIN 10 - GRID NO. 2
 PIN 11 - CATHODE



PIN 12 - HEATER
 METAL SHELL LIP:
 ANODE
 GRID NO. 3

BOTTOM VIEW

CONTINUED ON FOLLOWING PAGE

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RATINGS

DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE, GRID #3 VOLTAGE	14 000	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	410	VOLTS
MAXIMUM GRID #1 VOLTAGE:		
DC NEGATIVE-BIAS VALUE	125	VOLTS
DC POSITIVE-BIAS VALUE	0	VOLTS
POSITIVE-PEAK VALUE	2	VOLTS
MAXIMUM DC PEAK HEATER-CATHODE VOLTAGE: ^A		
HEATER NEGATIVE WITH RESPECT TO CATHODE		
DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS	410	VOLTS
AFTER EQUIPMENT WARM-UP PERIOD	140	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	140	VOLTS

^A CATHODE SHOULD BE RETURNED TO ONE SIDE OR TO THE MID-TAP OF THE HEATER TRANSFORMER WINDING.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE, GRID #3 VOLTAGE	12 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE ^A	-33 TO -77	VOLTS
DC FOCUSING COIL CURRENT ^B (APPROX.)	105 $\pm$ 20%	MA.
DC ION TRAC CURRENT STANDARD COIL #111 (APPROX.)	80 $\pm$ 50%	MA.

^A VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.^B FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 30 FOOT LAMBERTS ON A 10" BY 13 1/4" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 2.75 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS
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